



Fact Sheets and Information Papers

Revision to the Mixture and Derived From Rule

June 2003

BACKGROUND: The mixture and derived-from rules are a part of the RCRA regulations that define which wastes are considered to be hazardous and therefore subject to RCRA Subtitle C regulations. The mixture rule, located in 40 CFR 261.3(a)(2)(iii) and (iv), essentially states that a solid waste becomes regulated as a hazardous waste if it is mixed with one or more listed hazardous wastes. The derived-from rule, found in 40 CFR 261.3(c)(2)(i) stipulates that all solid wastes generated from the treatment, storage, or disposal of hazardous waste remains a hazardous waste. These derived-from wastes include wastes such as spill residues, sludge, incinerator ash, etc. There are currently 29 waste codes in RCRA listed solely for ignitability, corrosivity, and reactivity (ICR). Under the old regulations, there was an exemption in the mixture rule for these types of listed wastes. Mixtures of solid wastes and wastes listed solely for ICR could fall out of hazardous waste regulation provided that the resultant mixture did not exhibit any hazardous characteristics. However, there was no similar exclusion for derived from wastes, or wastes meeting the original listing description as generated. Consequently, these types of wastes were not able to exit Subtitle C of RCRA, even if they did not exhibit hazardous characteristics. EPA recognized this inconsistency and issued a final rule on May 16, 2001 that expanded the scope of the old mixture rule exclusion: (Hazardous Waste Identification Rule (HWIR): Revisions to the Mixture and Derived-from Rules; FR 27266). The final rule allows all wastes listed solely for characteristics to be treated identically, whether they are mixtures, treatment residues, or wastes meeting the original description as generated. All of these types of wastes will now be able to exit Subtitle C of RCRA, provided that they do not exhibit hazardous characteristics.

SIGNIFICANCE TO THE ARMY: The Army currently generates many of the wastes listed solely for characteristics on a routine basis. These include unused nitroglycerine, acetone, xylene, and methanol, along with F003, K044, K045 and K047 wastes. Many of these items do not actually exhibit hazardous characteristics, but are managed as HW because they meet the criteria for the original listing described in 40 CFR 261. For example, liquid nitroglycerine manufactured for medicinal purposes does not exhibit the reactivity characteristic, but it is required to be managed as a P081 waste when discarded because there are no other active ingredients present. Similarly, still bottoms/residues from methanol and xylene recycling units rarely exhibit the ignitability characteristic, but must be managed as F003 wastes because of the derived from rule. Prior to this new rule, the only mechanism for these types wastes streams to be classified as non-hazardous was for individual generators to formally delist their waste in accordance with 40 CFR 260. The new language in 40 CFR 261.3(g)(1) allows these types of wastes to exit RCRA-C if they do not exhibit hazardous characteristics.

LDR APPLICABILITY: Although this issue is not specifically addressed in the new regulatory language, it was mentioned in the preamble to the final rule. EPA stated that when a waste has been listed for ICR and that waste does not exhibit any hazardous characteristics at the point of generation, then that waste is not subject to LDR standards. However, if the characteristic were

removed subsequent to the point of generation, the waste would be subject to all applicable requirements in 40 CFR 268 and could not be land disposed until the appropriate standard(s) were met. It should be noted that generators taking advantage of the new exclusion are subject to one paperwork requirement in 40 CFR 268.7(a)(7). Generators must place a one-time notice in their files stating that they have determined the waste is excluded from the definition of hazardous waste. The notice must include a description of the waste generated, which particular exclusion is being claimed, and the final disposition of the waste.

RELATIONSHIP TO CONTAINED IN POLICY: EPA's long standing, but never codified "contained-in policy" clarifies the application of RCRA hazardous waste regulations to environmental media. Contaminated media are not considered solid wastes in the sense of being abandoned, recycled, or inherently waste-like as those terms are defined in RCRA regulations. However, the environmental media contaminated with listed hazardous wastes must be managed as hazardous wastes because they "contain" listed waste (until the EPA/State makes a site-specific determination). The new rule does not directly affect the implementation of the contained-in policy; however, contaminated media are eligible for the exclusion 40 CFR 261.3(g). FR 51234 states that contaminated media containing a waste listed solely for a characteristic would no longer need to be managed as hazardous waste when it no longer exhibits a characteristic. EPA also states in the preamble that these decharacterized wastes would remain subject to LDR requirements where applicable. Although this new language appears to be favorable, it will provide minimal benefit to the regulated community. The decharacterized soils subject to LDRs will still be required to comply with the ninety percent constituent reduction standard in 40 CFR 268.49.

STATE AUTHORIZATION: The mixture rule and derived from rules predate HSWA authority and are therefore non-HSWA requirements. Since these new provisions are less stringent than existing Federal requirements, states that had received authorization for the mixture and derived from rules prior to August of 2001 were not required to modify their programs. As of June 2003, the revisions are in effect for the following States: AK, AL, AR, CT, DE, GA, IA, KS, KY, MA, MD, ME, MI, MN, MS, MT, ND, NE, NH, NM, OH, OR, RI, SD, TN, WA, WI, and the District of Columbia.

*Hazardous and Medical Waste Program, Mr. Matt Walter
5158 Blackhawk Road, ATTN: MCHB-TS-EHM
Aberdeen Proving Ground, MD 21010-5403
(410) 436-3651, DSN 584-3651*

[Back to Fact Sheet Index](#)